

Abstract of the Disclosure

A tandem type printer is provided with a plurality of scanning optical systems, a plurality of $f\theta$ lenses and photoconductive drums, which correspond to the scanning optical systems, respectively. Each scanning optical system includes a laser source and a deflector that deflects the laser beam emitted by the laser source to scan, in a main scanning direction, within a predetermined angular range. The deflected laser beam is converged by the $f\theta$ lens on the corresponding photoconductive drum and form an image. Images formed on the plurality of photoconductive drums are developed and transferred on a sheet in an overlaid fashion. Each $f\theta$ lens includes a glass lens that is burdened with substantially all the power, in the main scanning direction, of the $f\theta$ lens, and a plastic lens that is burdened with compensation for aberrations of the $f\theta$ lens. Further, a diffraction lens structure is formed to compensate for a lateral chromatic aberration of the $f\theta$ lens in the main scanning direction. Each $f\theta$ lens satisfies conditions:

$$0.0 < f_a/f_d < 0.20; \text{ and}$$

$$0.75 < f_a/f_g < 1.20,$$

where, f_a , f_d and f_g represent focal lengths of the $f\theta$ lens, diffraction lens structure, and glass lens, in the main scanning direction, respectively.